

Claims

We claim:

1. A package for bone-in meat comprising:

5 a first wall comprising a multilayer structure comprising a heat-sealant layer comprising a material selected from the group consisting of polyolefins, ionomers and blends thereof, a first polyamide layer, and a barrier layer, wherein the multilayer structure is oriented and all layers are coextruded together to form the multilayer structure.

2. The package of claim 1 further comprising a bone-in meat product within the package.

10 3. The package of claim 2 wherein the package is heat shrunk around the bone-in meat product.

4. The package of claim 1 wherein the barrier layer is disposed between the heat-sealant layer and the first polyamide layer.

5. The package of claim 1 wherein the first polyamide layer is disposed between the heat-sealant layer and the barrier layer.

15 6. The package of claim 1 wherein the barrier layer comprises ethylene vinyl alcohol copolymer.

7. The package of claim 6 wherein the barrier layer comprises an ethylene content of between about 24 mol % and about 52 mol %.

20 8. The package of claim 6 wherein the barrier layer comprises an ethylene content of between about 27 mol % and about 42 mol %.

9. The package of claim 1 wherein the heat-sealant layer comprises polyethylene.

10. The package of claim 1 wherein the heat-sealant layer comprises a blend of linear low density polyethylene and low density polyethylene.

11. The package of claim 1 wherein the first polyamide layer comprises a blend of semi-crystalline polyamide and amorphous polyamide.
12. The package of claim 1 wherein the first polyamide layer comprises a blend of nylon 6 and amorphous polyamide.
- 5 13. The package of claim 1 wherein the first polyamide layer comprises a blend of nylon 6,66 and amorphous polyamide.
14. The package of claim 1 wherein the first polyamide layer comprises about 70% by weight to about 99% by weight of a semi-crystalline polyamide and about 1% by weight to about 30% by weight amorphous polyamide.
- 10 15. The package of claim 1 wherein the first polyamide layer comprises a blend of a first semi-crystalline polyamide, a second semi-crystalline polyamide, and amorphous polyamide.
16. The package of claim 1 wherein the first polyamide layer comprises a blend of nylon 6, nylon 6,69, and amorphous polyamide.
- 15 17. The package of claim 1 wherein the first polyamide layer comprises about 60% by weight to about 80% by weight of a first semi-crystalline polyamide, about 10% by weight to about 30% by weight of a second semi-crystalline polyamide, and about 1% by weight to about 30% by weight of an amorphous polyamide.
18. The package of claim 1 wherein the first multilayer structure further comprises a tie
20 layer.
19. The package of claim 1 wherein the first polyamide layer forms an outer layer of the multilayer structure.
20. The package of claim 1 wherein the multilayer structure is annealed.

21. The package of claim 1 wherein said multilayer structure is plasticized.
22. The package of claim 1 wherein the multilayer structure is moisturized by the application of water to the multilayer structure.
23. The package of claim 1 wherein the multilayer structure is irradiated to promote crosslinking between the layers of the multilayer structure.
24. The package of claim 1 wherein the multilayer structure is irradiated to promote cross-linking within at least one layer of the multilayer structure.
25. The package of claim 1 wherein the multilayer structure is between about 1 mil and about 8 mils thick.
26. The package of claim 1 wherein the multilayer structure is between about 1.5 mils and 5 mils thick.
27. The package of claim 1 wherein the package is in the form of a tube having a space therein for a product.
28. The package of claim 1 wherein the first wall is heat-sealed to a second wall and further wherein the first wall and the second wall form a space for the bone-in meat product.
29. The package of claim 28 wherein the first wall and the second wall comprise the same multilayer structure.
30. The package of claim 1 wherein the multilayer structure further comprises a second polyamide layer wherein the first and second polyamide layers are disposed on opposite sides of the barrier layer.
31. The package of claim 30 wherein the second polyamide layer comprises a blend of a semi-crystalline polyamide and amorphous polyamide.

32. The package of claim 30 wherein the second polyamide layer comprises a blend of nylon 6 and amorphous polyamide.

33. The package of claim 30 wherein the second polyamide layer comprises a blend of nylon 6,66 and amorphous polyamide.

5 34. The package of claim 30 wherein the second polyamide layer comprises a blend of about 70% by weight to about 99% by weight of a first semi-crystalline polyamide and about 1% by weight to about 30% by weight amorphous polyamide.

35. The package of claim 30 wherein the second polyamide layer comprises a blend of a first semi-crystalline polyamide, a second semi-crystalline polyamide, and amorphous
10 polyamide.

36. The package of claim 30 wherein the second polyamide comprises a blend of nylon 6, nylon 6,69 and amorphous polyamide.

37. The package of claim 30 wherein the second polyamide layer comprises a blend of about 60% by weight to about 80% by weight of a first semi-crystalline polyamide, about
15 10% by weight to about 30% by weight of a second semi-crystalline polyamide, and about 1% by weight to about 30% by weight amorphous polyamide.

38. The package of claim 30 wherein the multilayer structure further comprises an outer layer comprising a material selected from the group consisting of polyolefins, polyamides, ionomers, polyesters and blends thereof, wherein the first polyamide layer is disposed
20 between the barrier layer and the outer layer and the second polyamide layer is disposed between the barrier layer and the heat-sealant layer.

39. The package of claim 38 wherein the outer layer of the multilayer structure comprises a blend of linear low density polyethylene and low density polyethylene.

40. The package of claim 38 wherein the multilayer structure further comprises a tie layer disposed between the outer layer and the first polyamide layer.
41. The package of claim 38 wherein the multilayer structure further comprises a tie layer disposed between the heat-sealant layer and the second polyamide layer.
- 5 42. The package of claim 38 wherein the multilayer structure comprises a heat-sealant layer comprising an amount of polymer greater than an amount of polymer in the outer layer.
43. The package of claim 38 wherein the multilayer structure further comprises a first tie layer disposed between the outer layer and the first polyamide layer, and a second tie layer
10 disposed between the heat-sealant layer and the second polyamide layer.
44. The package of claim 1 wherein the multilayer structure has about 25% free shrink at about 200°F.
45. The package of claim 1 wherein the multilayer structure has a total orientation factor of between about 6 and about 20.
- 15 46. The package of claim 1 wherein the multilayer structure has a total orientation factor of between about 8 and 13.
47. The package of claim 1 wherein at least one layer of the multilayer structure comprises a tie concentrate blended therein.